



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Red Bluff Fish & Wildlife Office
10950 Tyler Road, Red Bluff, California 96080
(530) 527-3043, FAX (530) 529-0292



February 1, 2017

To: Interested Parties

From: Scott Voss, Fish Biologist, Red Bluff Fish and Wildlife Office

Subject: Biweekly report (January 15, 2017 - January 28, 2017)

Please find attached preliminary daily estimates of passage, 90% confidence intervals, and fork length ranges of unmarked juvenile salmonids sampled at Red Bluff Diversion Dam for the period January 15, 2017 through January 28, 2017. Race designation was assigned using length-at-date criteria.

This report also contains graphical displays of salmonid passage dating back to 2009 for comparison.

Please note that data contained in these reports is subject to revision as this data is preliminary and undergoing QA/QC procedures.

If you have any questions, please feel free to contact me at (530) 527-3043 ext 243.

Table 1.— Preliminary estimates of passage by brood-year (BY) and run for unmarked juvenile Chinook salmon and steelhead trout captured by rotary-screw traps at Red Bluff Diversion Dam (RK391), Sacramento River, CA, for the dates listed below. Results include estimated passage, peak river discharge volume, water temperature, turbidity, and fork length (mm) range in parentheses. A dash (-) indicates that sampling was not conducted on that date.

Date	Discharge volume (cfs) ¹	Water temperature (°C)	Water turbidity (NTU)	Estimated passage				
				BY16 Winter	BY16 Spring	BY16 Fall	BY16 Late-Fall	BY17 RBT
1/15/2017	47,000	9.1	—	—	—	—	—	—
1/16/2017	43,500	9.0	—	—	—	—	—	—
1/17/2017	42,400	9.1	12.1	0 (—)	0 (—)	383,150 (28 – 40)	0 (—)	0 (—)
1/18/2017	41,400	7.9	—	—	—	—	—	—
1/19/2017	71,900	8.4	—	—	—	—	—	—
1/20/2017	74,100	8.7	—	—	—	—	—	—
1/21/2017	73,200	8.6	—	—	—	—	—	—
1/22/2017	64,300	8.7	—	—	—	—	—	—
1/23/2017	76,900	8.7	—	—	—	—	—	—
1/24/2017	52,500	8.8	—	—	—	—	—	—
1/25/2017	44,900	8.5	—	—	—	—	—	—
1/26/2017	40,100	8.7	28.8	0 (—)	0 (—)	26,991 (31 – 42)	0 (—)	0 (—)
1/27/2017	39,900	8.7	27.1	0 (—)	0 (—)	44,811 (30 – 44)	0 (—)	0 (—)
1/28/2017	38,300	8.6	22.2	479 (122)	769 (49 – 52)	163,007 (27 – 47)	0 (—)	0 (—)
Biweekly Total ²				1,119	1,793	3,229,939	0	0
<i>Biweekly Lower 90% Confidence Interval</i>				-675	-956	778	0	0
<i>Biweekly Upper 90% Confidence Interval</i>				2,910	4,545	6,459,098	0	0
Brood Year Total				523,162	52,569	4,988,563	68,931	0
<i>Brood year Lower 90% Confidence Interval</i>				386,786	26,827	-436,766	36,346	0
<i>Brood year Upper 90% Confidence Interval</i>				659,748	78,581	10,554,982	101,516	0

¹ Peak daily discharge values do not account for diversions at RBDD and only represent peak flows registered at the Bend Bridge Gauging station (<http://cdec2.water.ca.gov/cgi-progs/queryFx?bnd>).

² Biweekly totals may be greater than the sum of the daily estimates presented in this table if sampling was not conducted on each day of the biweekly period. A dash (-) denotes those dates. To estimate daily passage for days that were not sampled, we impute missed sample days with the weekly mean value of days sampled within the week.

Juvenile Winter Chinook Salmon Estimated Passage

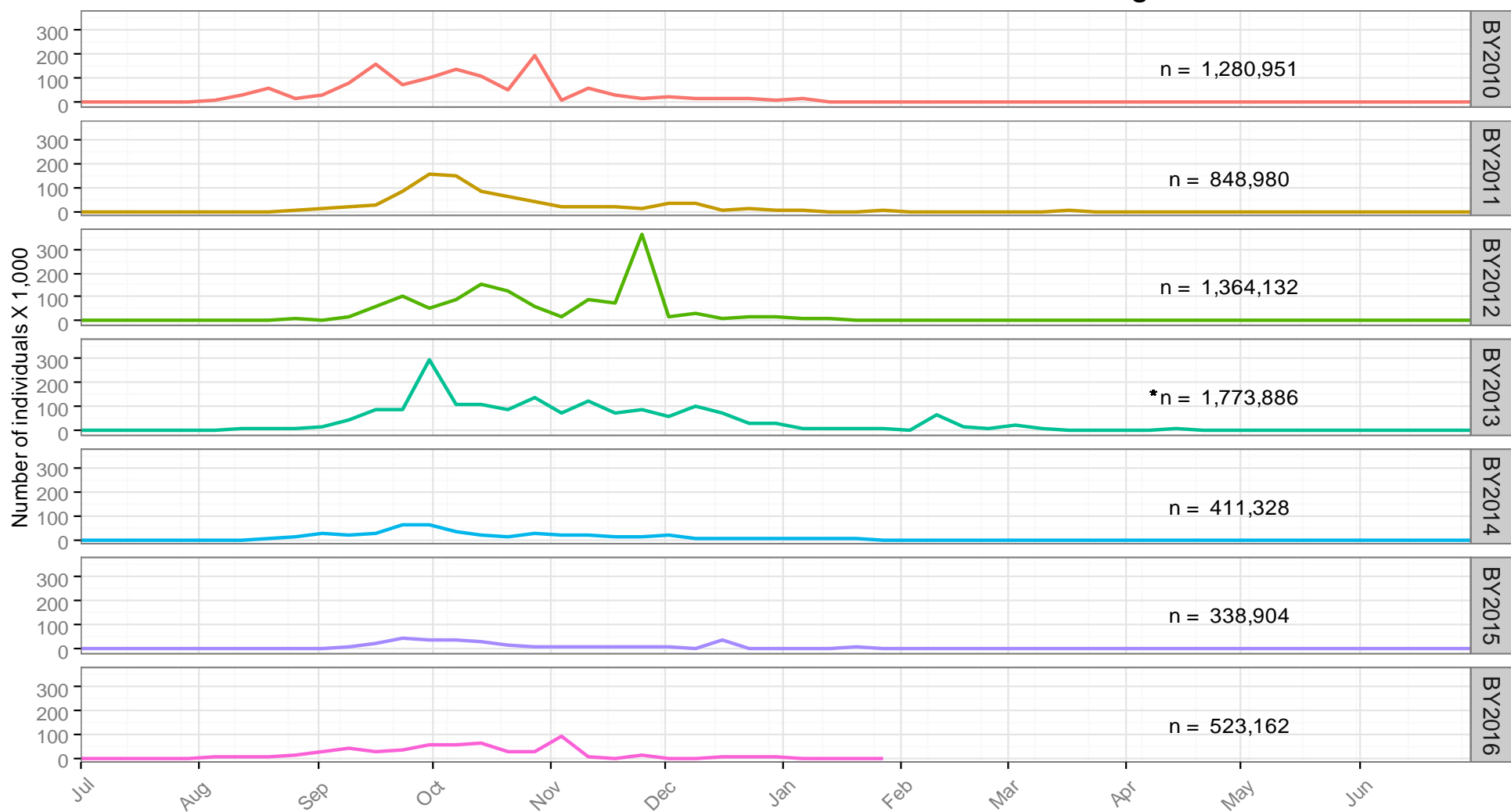


Figure 1. Weekly estimated passage of unmarked juvenile winter Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period July 1, 2010 to present.

*Winter run passage value interpolated using a monthly mean for the period October 1, 2013 - October 17, 2013 due to government shutdown.

Juvenile Spring Chinook Salmon Estimated Passage

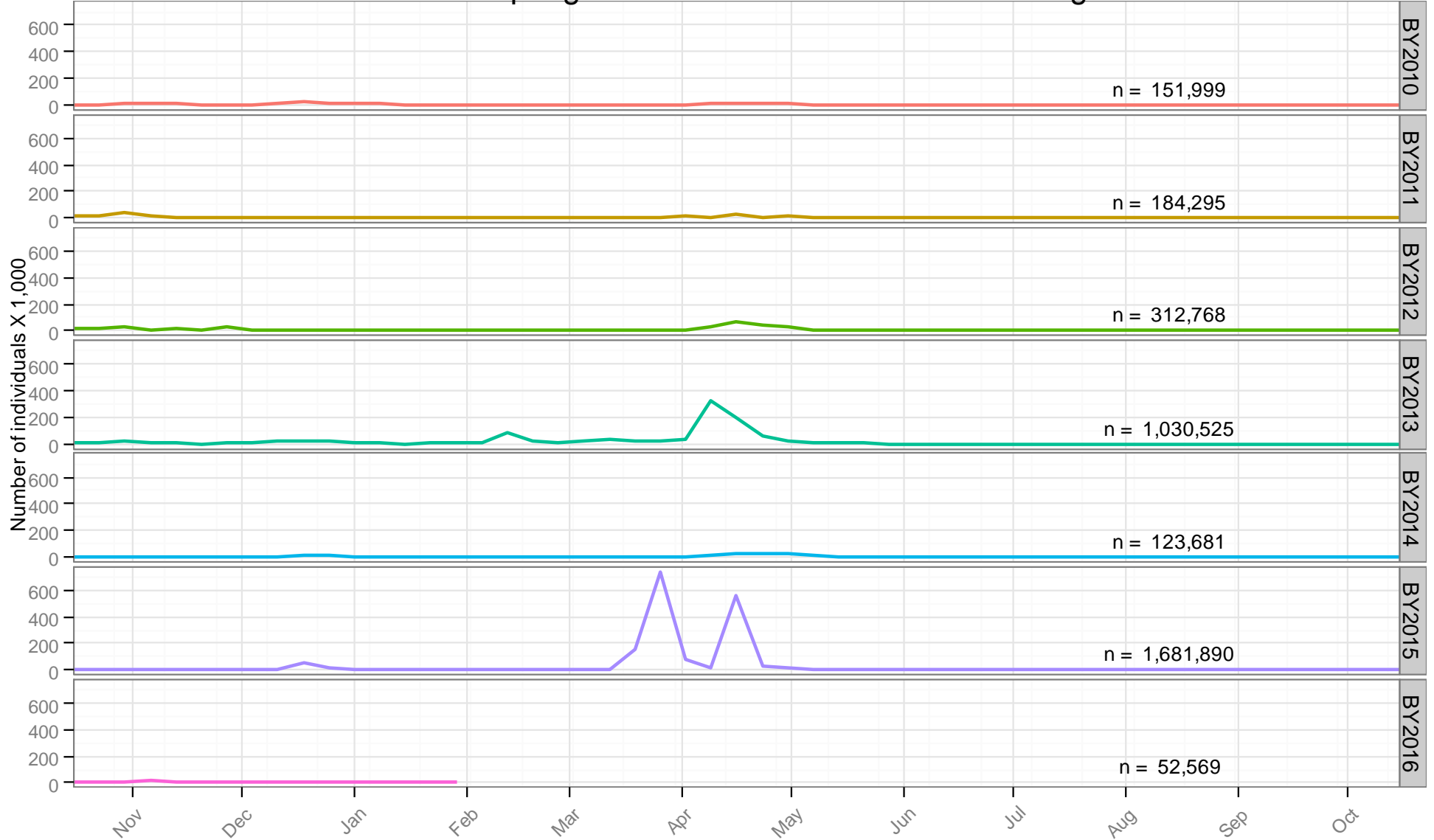


Figure 2. Weekly estimated passage of unmarked juvenile spring Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period October 16, 2010 to present .

Juvenile *Onchorhynchus mykiss* Estimated Passage

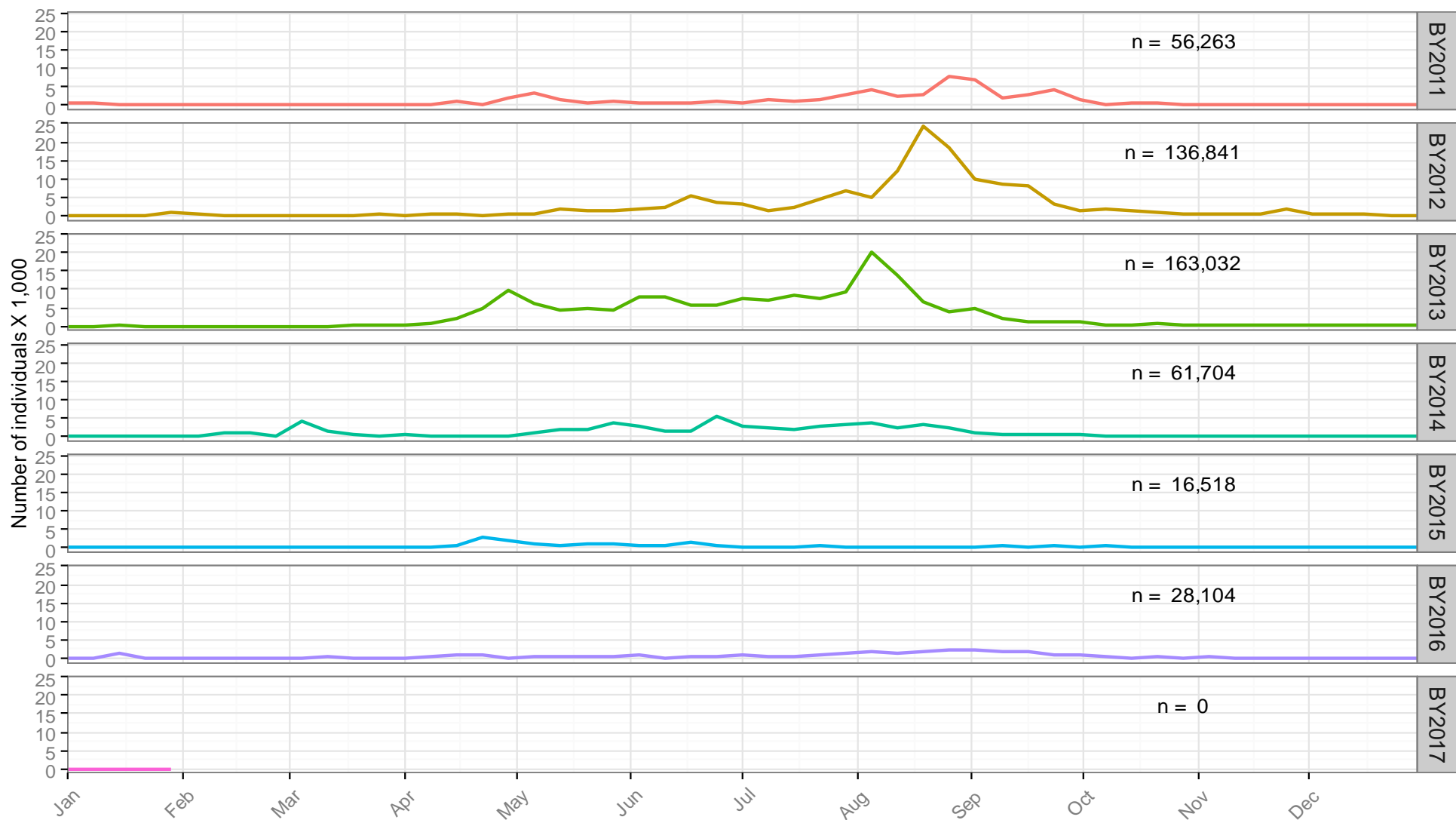


Figure 3. Weekly estimated passage of unmarked juvenile Rainbow/Steelhead trout at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period January 1, 2011 to present.

Juvenile Fall Chinook Salmon Estimated Passage

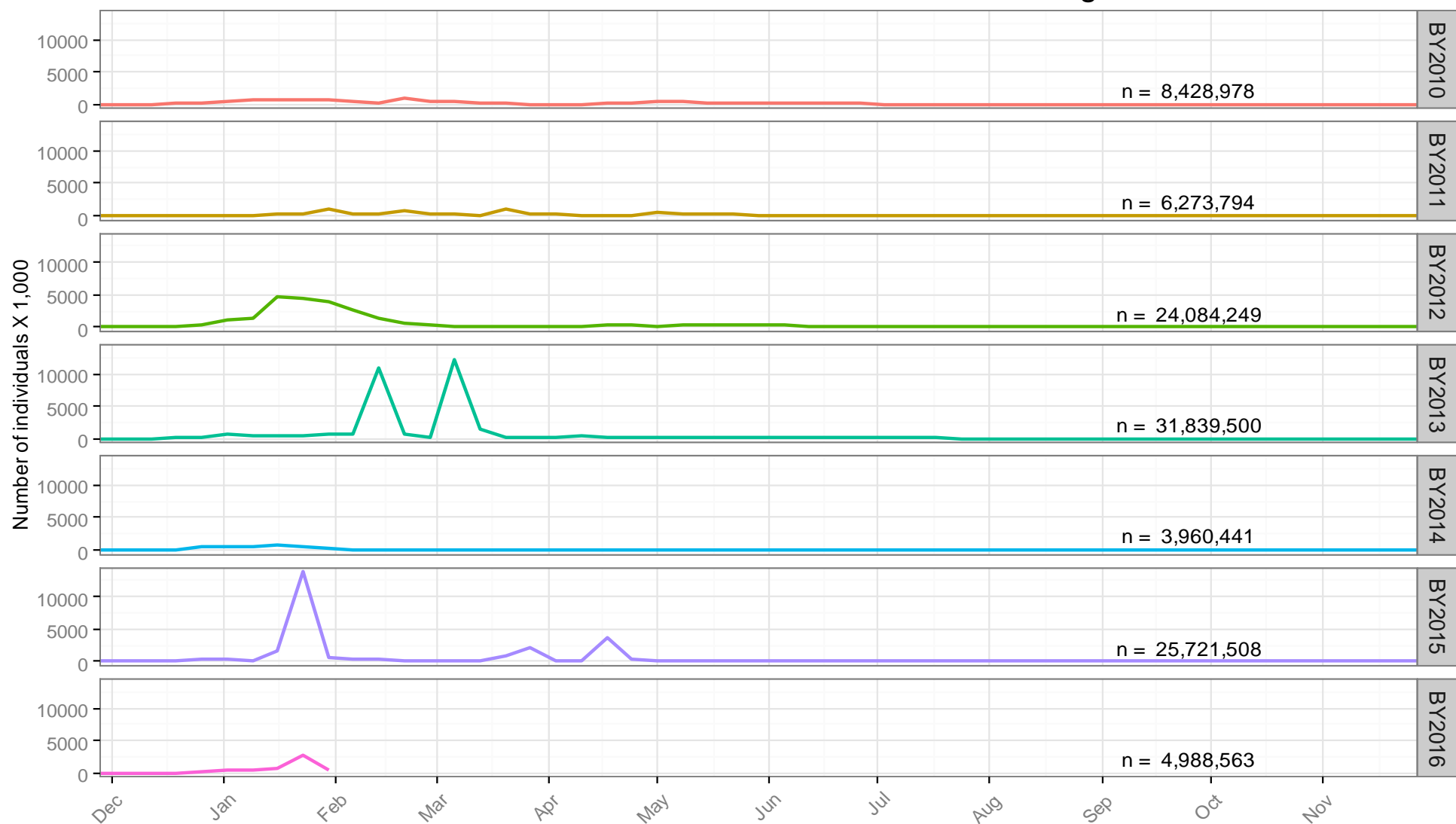


Figure 4. Weekly estimated passage of unmarked juvenile fall Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period December 1, 2010 to present .

Juvenile Late Fall Chinook Salmon Estimated Passage

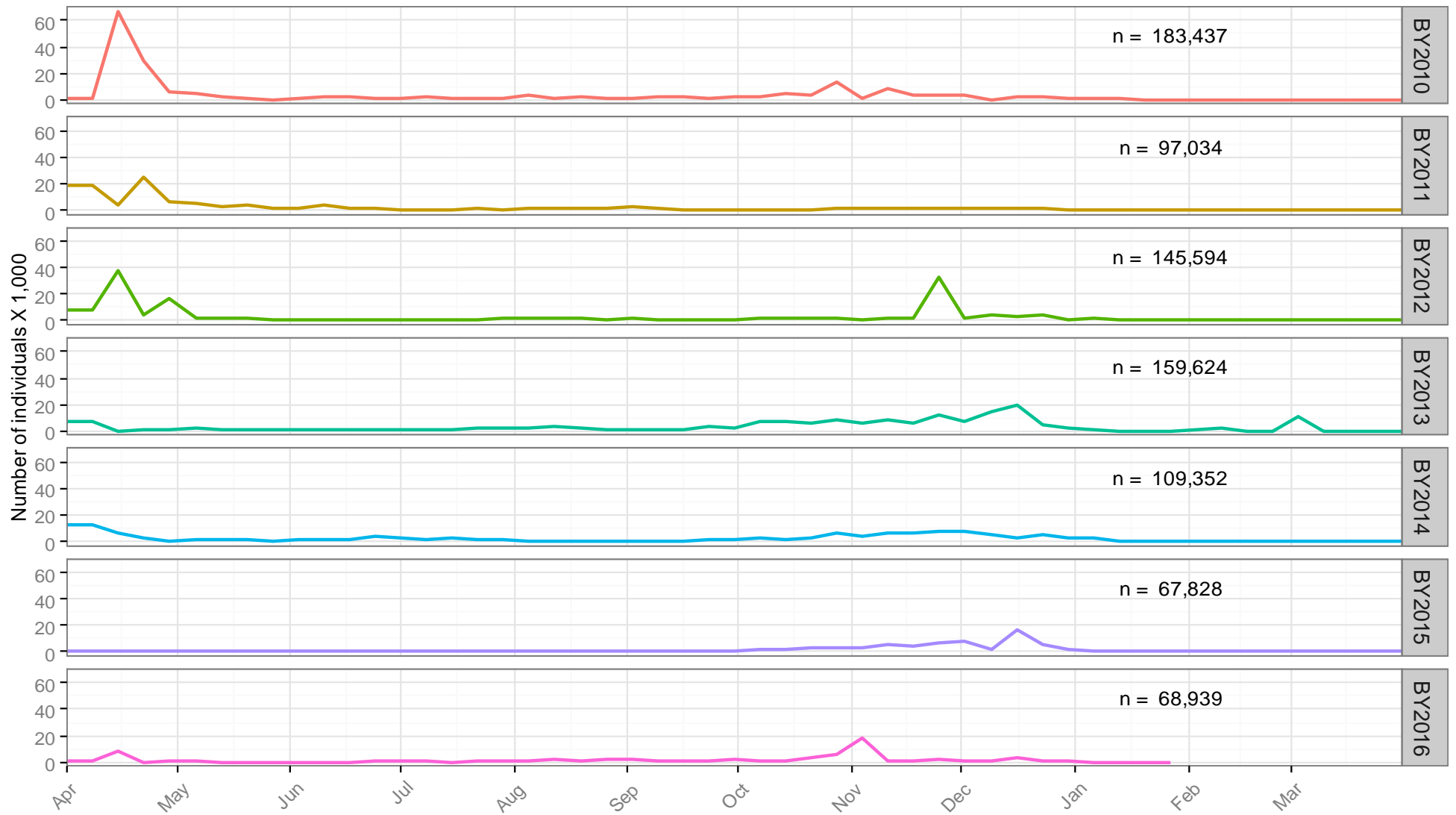


Figure 5. Weekly estimated passage of unmarked juvenile late fall Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period April 1, 2010 to present .

Weekly Estimated Chinook Passage at Red Bluff Diversion Dam - All Runs Combined

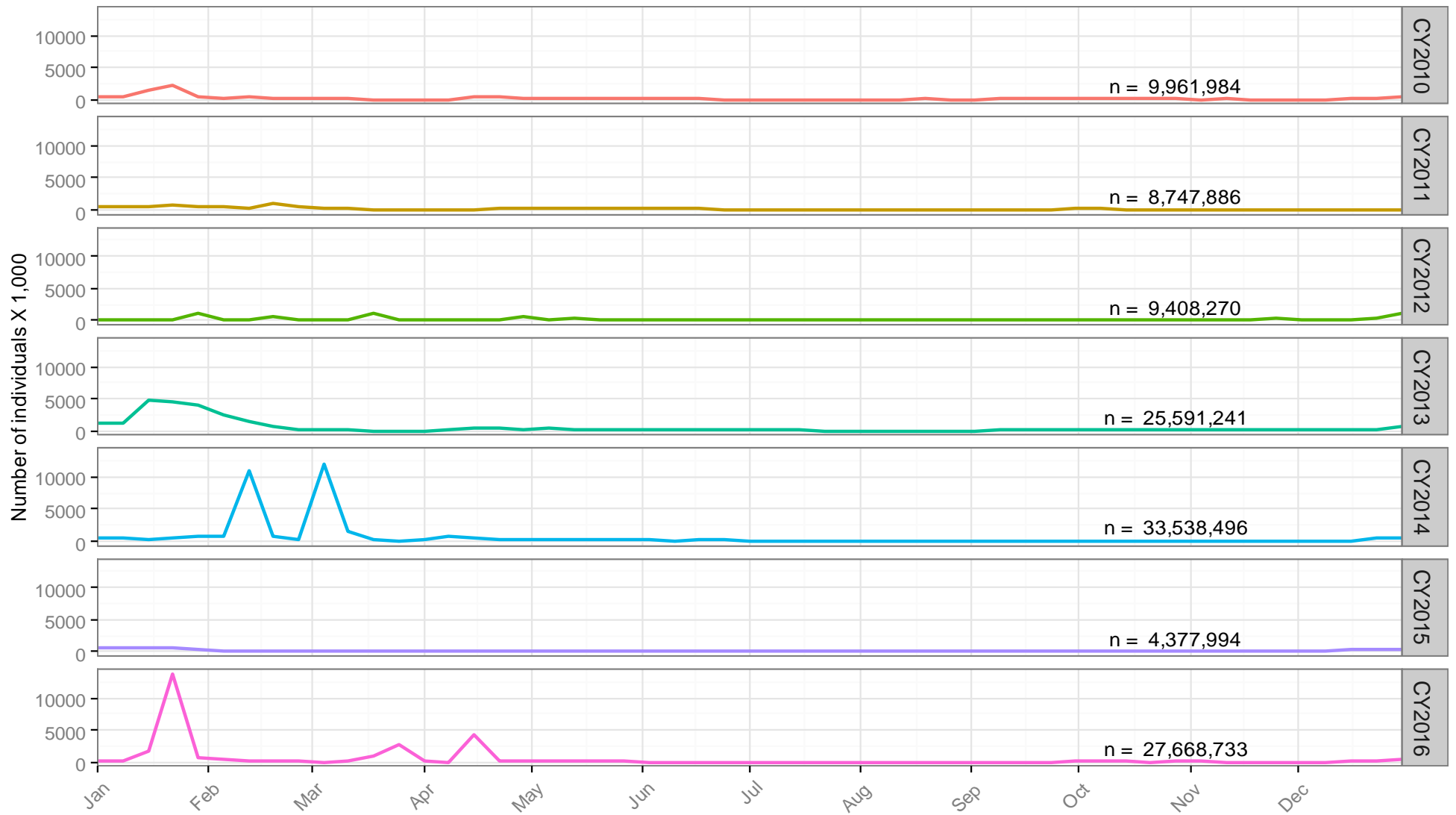


Figure 6. Weekly estimated passage of unmarked juvenile Chinook salmon at Red Bluff Diversion Dam (RK391) by calendar year. Fish were sampled using rotary-screw traps for the period January 1, 2010 to December 31, 2016